



3 November 2009

NAVAL AIR SYSTEMS COMMAND MOBILE FACILITY PROGRAM



***MF Program
Overview***

NAVAIR

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Report Documentation Page

*Form Approved
OMB No. 0704-0188*

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1. REPORT DATE 03 NOV 2009	2. REPORT TYPE	3. DATES COVERED 00-00-2009 to 00-00-2009		
4. TITLE AND SUBTITLE Naval Air Systems Command Mobile Facility Program		5a. CONTRACT NUMBER		
		5b. GRANT NUMBER		
		5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)		5d. PROJECT NUMBER		
		5e. TASK NUMBER		
		5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Air Systems Command,AIR-6.7.6.2,Patuxent River,MD,20670		8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)		
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited				
13. SUPPLEMENTARY NOTES 6th Bi-Annual DOD JOCOTAS Meeting with Rigid & Soft Wall Shelter Industry & Indoor & Outdoor Exhibition, 2-4 Nov 2009, Panama City Beach, FL				
14. ABSTRACT				
15. SUBJECT TERMS				
16. SECURITY CLASSIFICATION OF: a. REPORT unclassified		17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 42	19a. NAME OF RESPONSIBLE PERSON
b. ABSTRACT unclassified				
c. THIS PAGE unclassified				

MOBILE FACILITY PROGRAM

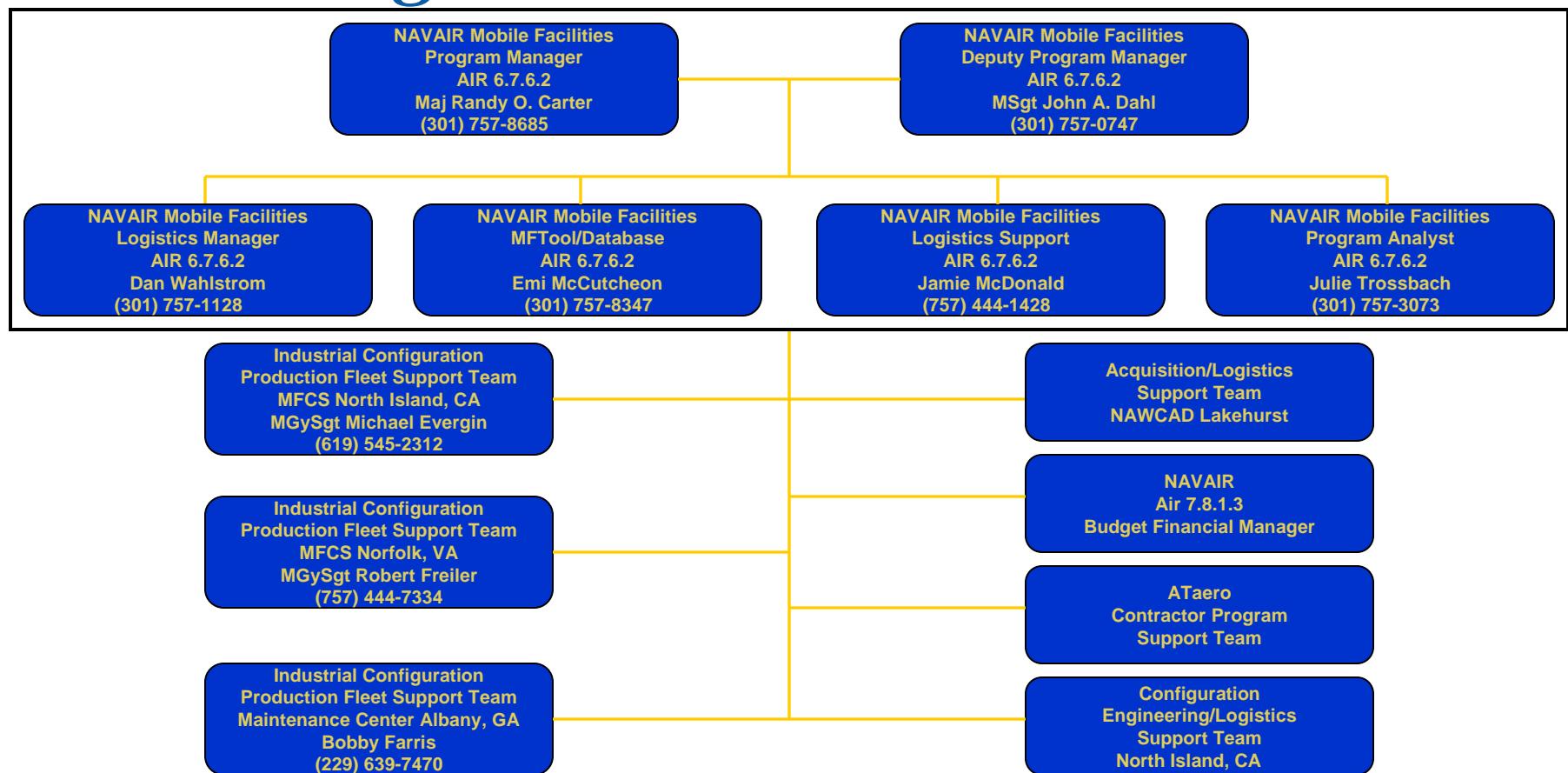


MOBILE FACILITY PROGRAM

PROGRAM POINTS OF CONTACT

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Organizational Structure





Mission Statement

MISSION: Our mission is to provide the best Mobile Facility technical support services in a timely, thorough, and professional manner to best assist the War Fighter to accomplish the mission and maximize readiness.

- Mobile Facility - 8' X 8' X 20' Mobile Tactical Shelters
- Transportable by most transportation modes
- Configured for habitability and user's mission
- Configured Mobile Facilities provide mobile logistics support
 - Aircraft maintenance, supply support, operational functions, administrative management, metrology, meteorology, photography, and other applications



Program Background

- The MF Program Office is located at NAS Patuxent River
 - Part of COMNAVIRSYSCOM AIR-6.7
- Been a **Navy** Program of Record for over 35 years
- Staffed with four military members (PM, DPM & two Fleet Liaisons); **USMC staffed**—USMC is the biggest users
- Getting a **GySgt** at each MFCS (Assistant Marine Liaison)
 - Staff with 6414 initially
- Comprised of three MF Configuration Sites (MFCSs):
 - MFCS Norfolk
 - MFCS North Island
 - MCA Albany

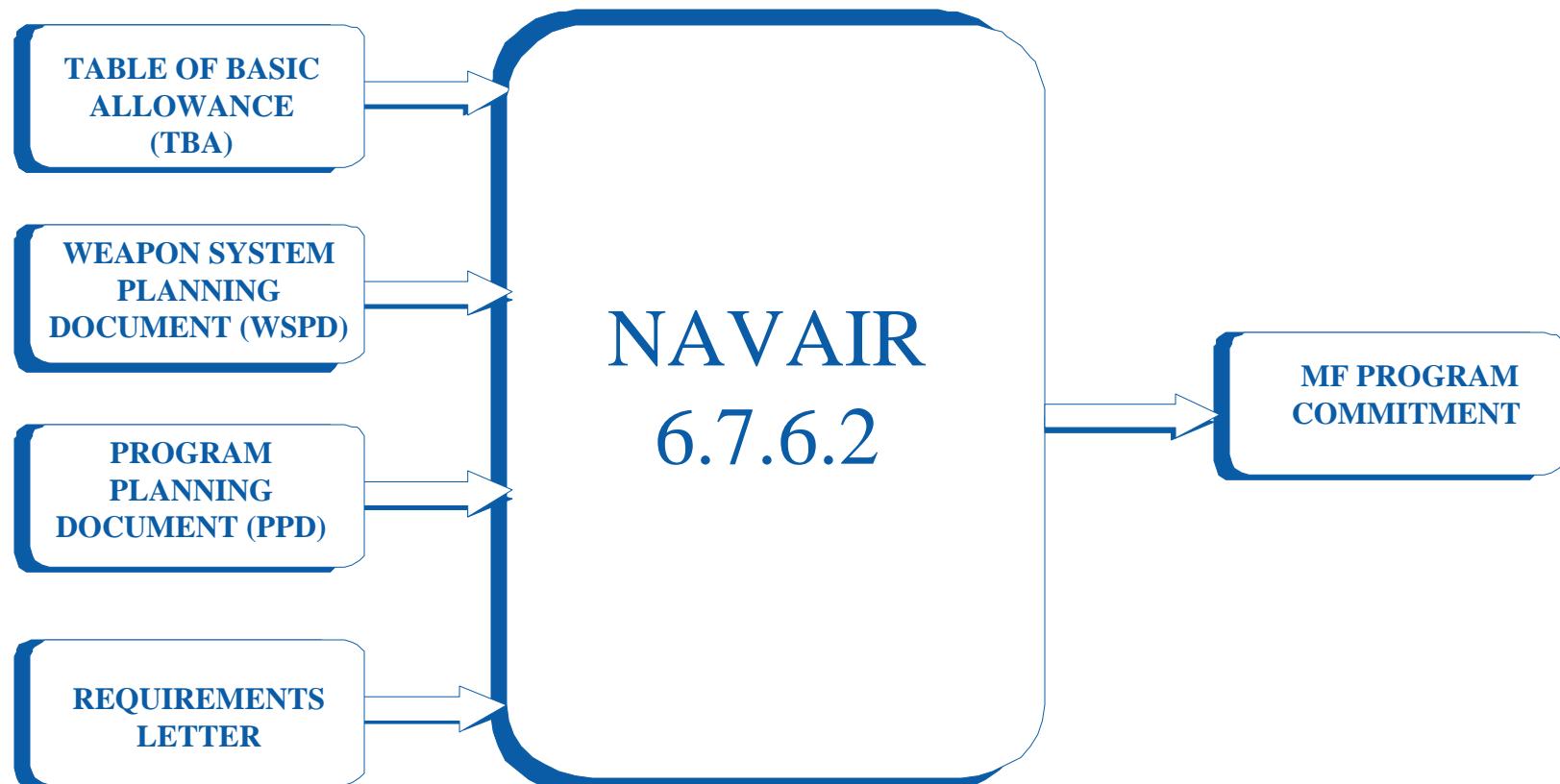


Mobile Facility Basics

- 20-year service life
- Integration Units (INUs) & butting kits allow Mobile Facilities (MFs) to be complexed together to create large work centers
- The power source connects to the INU & power is distributed to all MFs connected to it
- Maximum complex size is 41-interconnected MFs
- MFs can be stacked & complexed two-high
- Designed for sea, land & air transportation
- Seven basic shells designed into 215+ different configurations

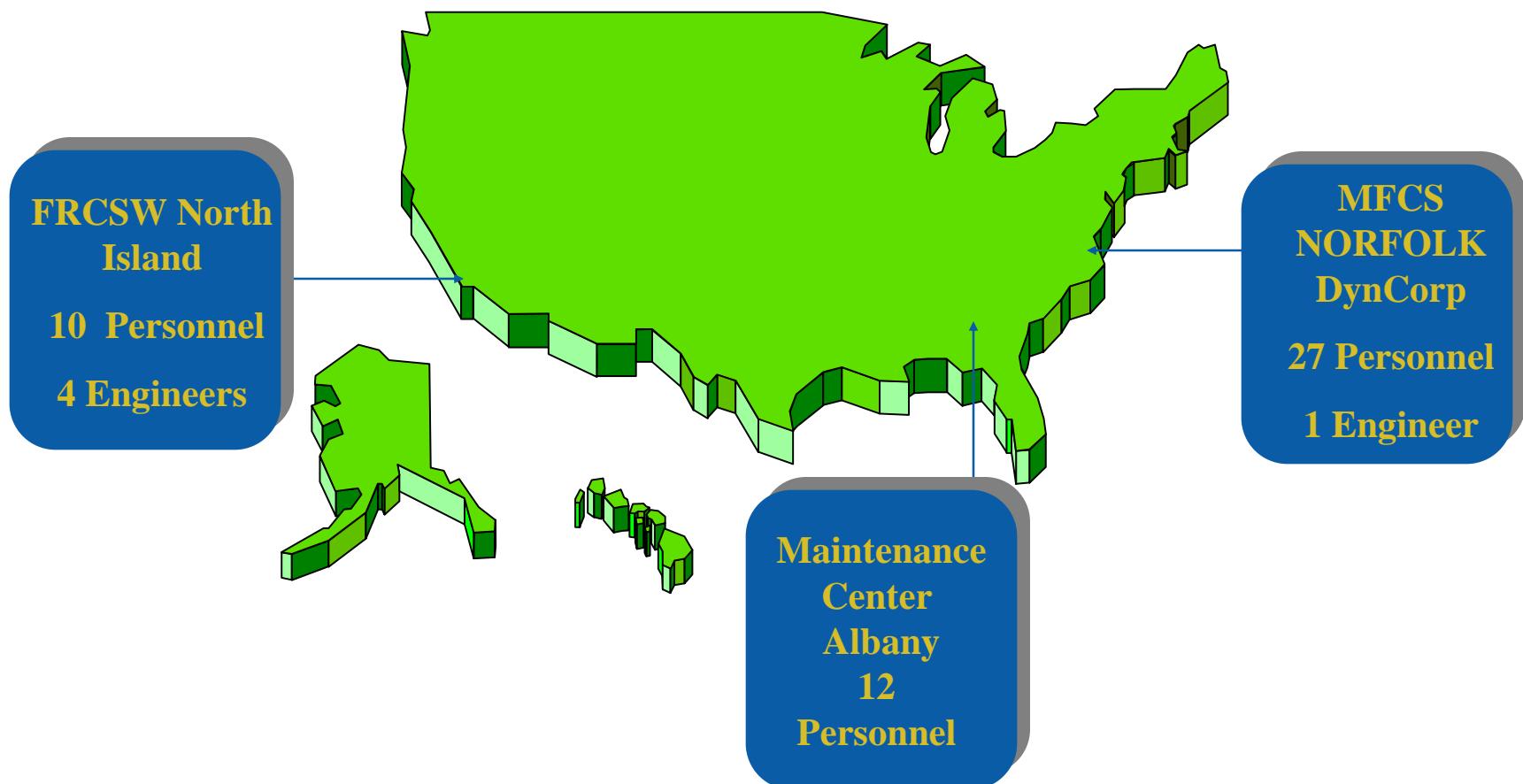


REQUIREMENTS GENERATION





MF Configuration Sites





In 2003, the Marine Corps established an Intermediate Maintenance Facility in support of OIF II aboard Al Asad, Iraq. The Marine Corps is currently shifting to Afghanistan and the Navy is disestablishing ELU-1 in Sembach Germany and transferring some assets to Afghanistan and returning others to the MF Program Office.



A total of 442 MF's are currently globally sourced to establish an IMA forward in support of the Global War on Terrorism. There are 224 in Al Asad, 21 in Bahrain and 197 in Afghanistan with more to follow in the near future.



PROGRAM PRODUCTS



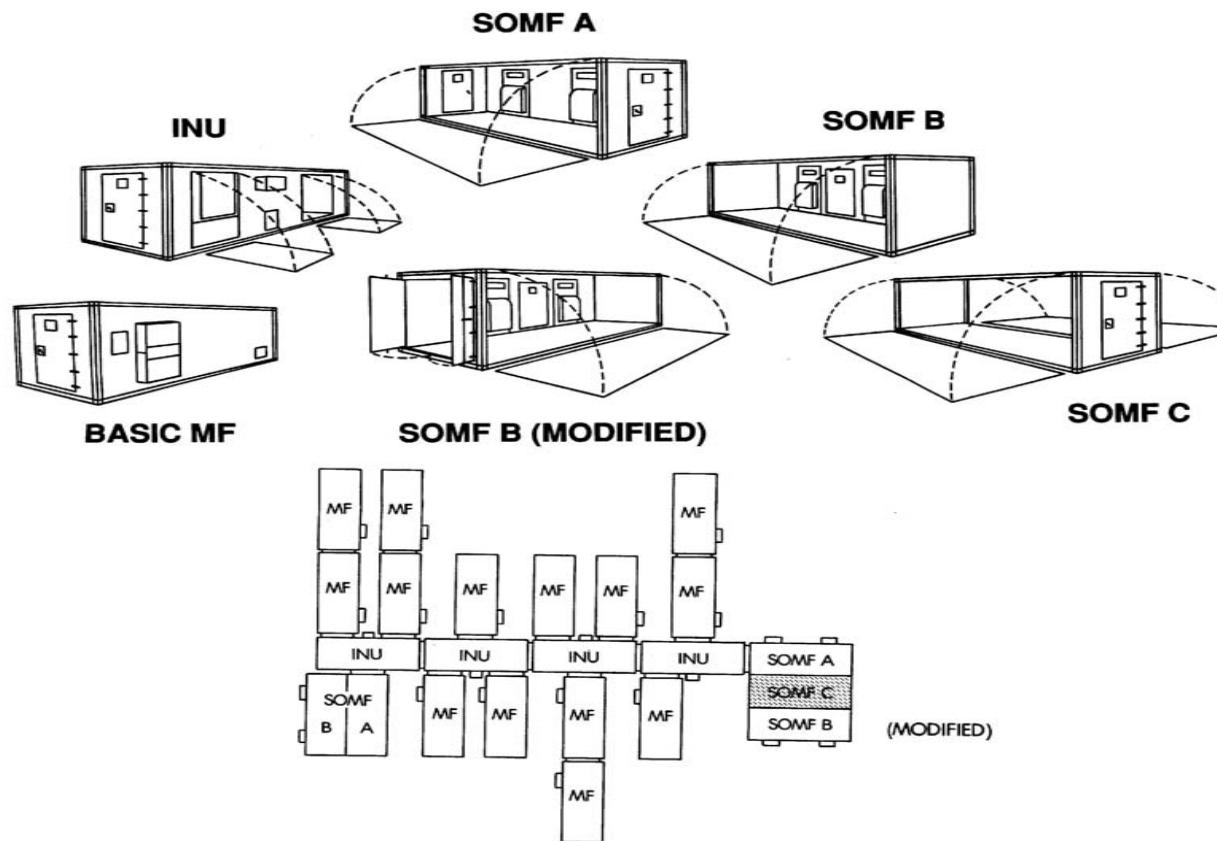
**215 ACTIVE
CONFIGURATIONS**

7 BASIC SHELLS





SEVEN MOBILE FACILITY TYPES

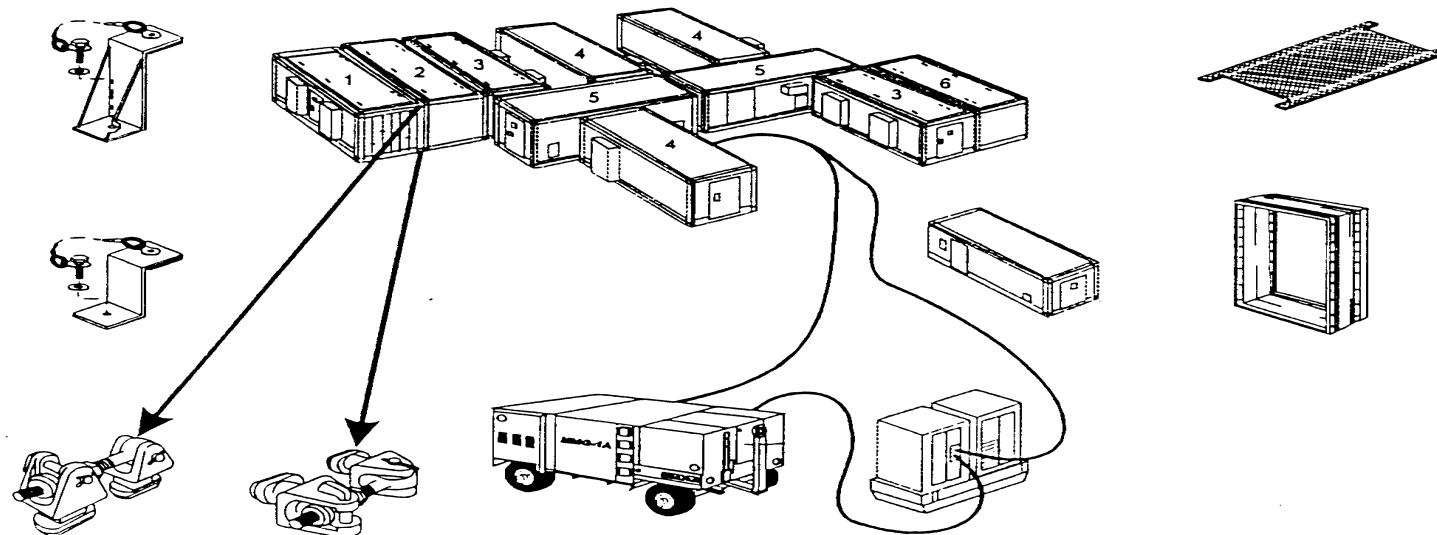


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THE FINEST • ANYTIME • ANYPLACE

PROGRAM EQUIPMENT





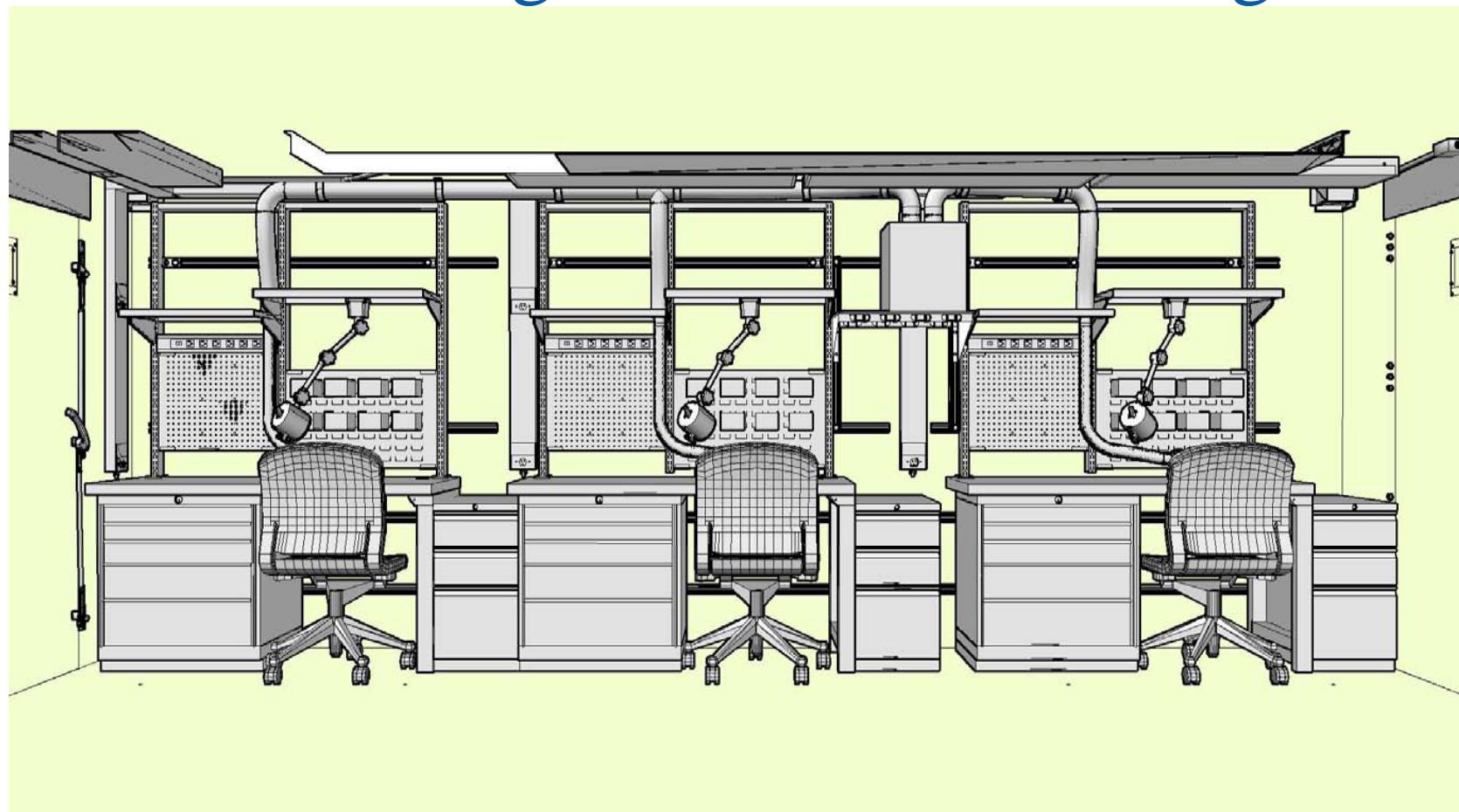
MF Tactical Functions

- Avionics Repair
- Machine Shops
- Welding
- Tire & Wheel Repair
- Sheet Metal
- Calibration (Metrology)
- Weather Stations (Meteorology)
- Aircraft Engine Test Stands
- Aviation Life Support Systems
- Aircrew Breathing Oxygen Repair
- Ordnance Launcher Repair
- Information Technology (IT)
- Supply Support
- Administrative Offices
- Aircrew Brief / De-brief Rooms
- Conference / Training Spaces
- Aircraft Battery Lockers
- Micro-miniature Repair
- Hydraulic Repair
- Production Control
- Technical Manual Libraries
- Cryogenics

MOBILE FACILITY PROGRAM



Provide Engineer & 3-D Drawings



MOBILE FACILITY PROGRAM

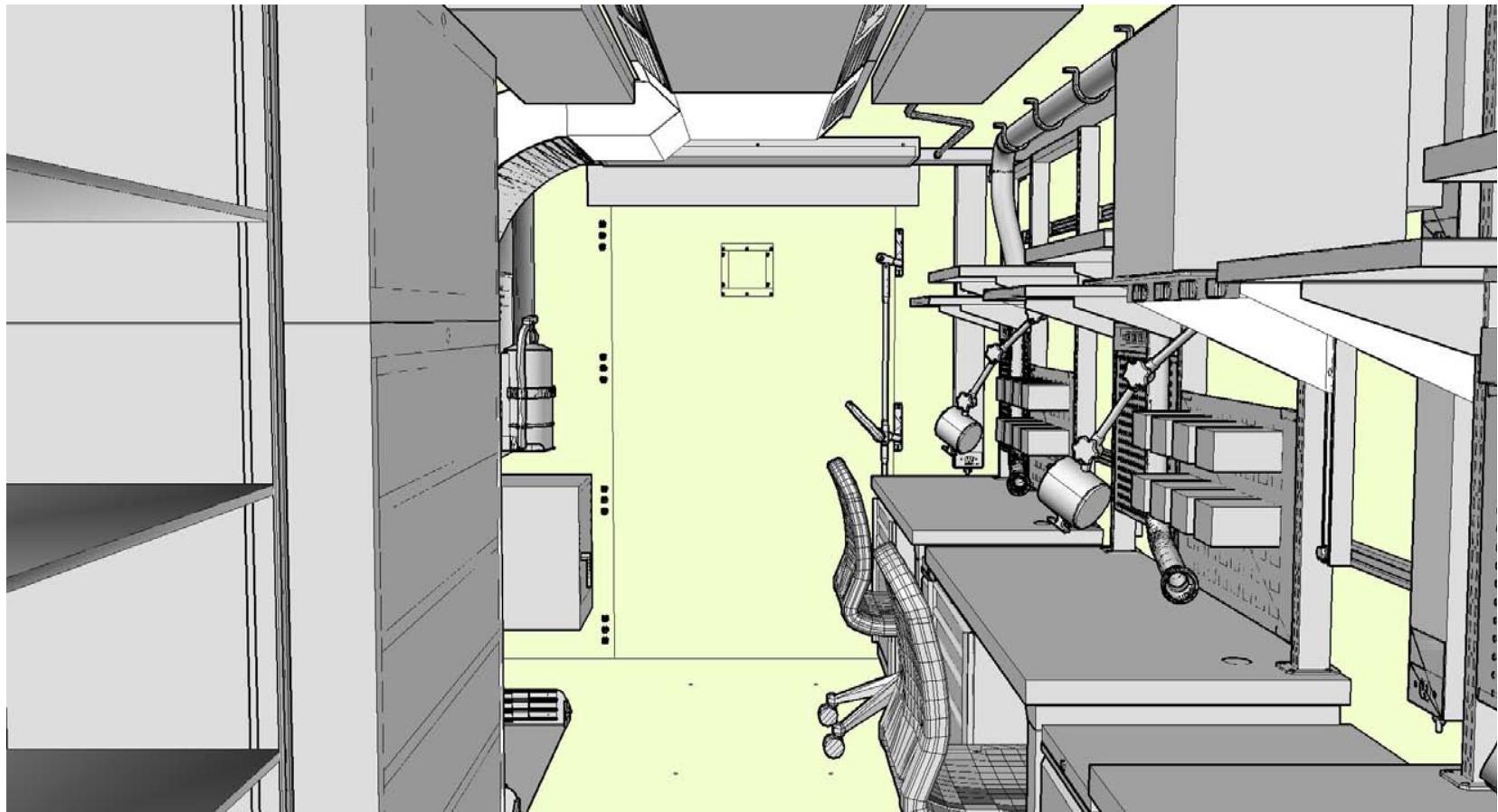


Provide Engineer & 3-D Drawings





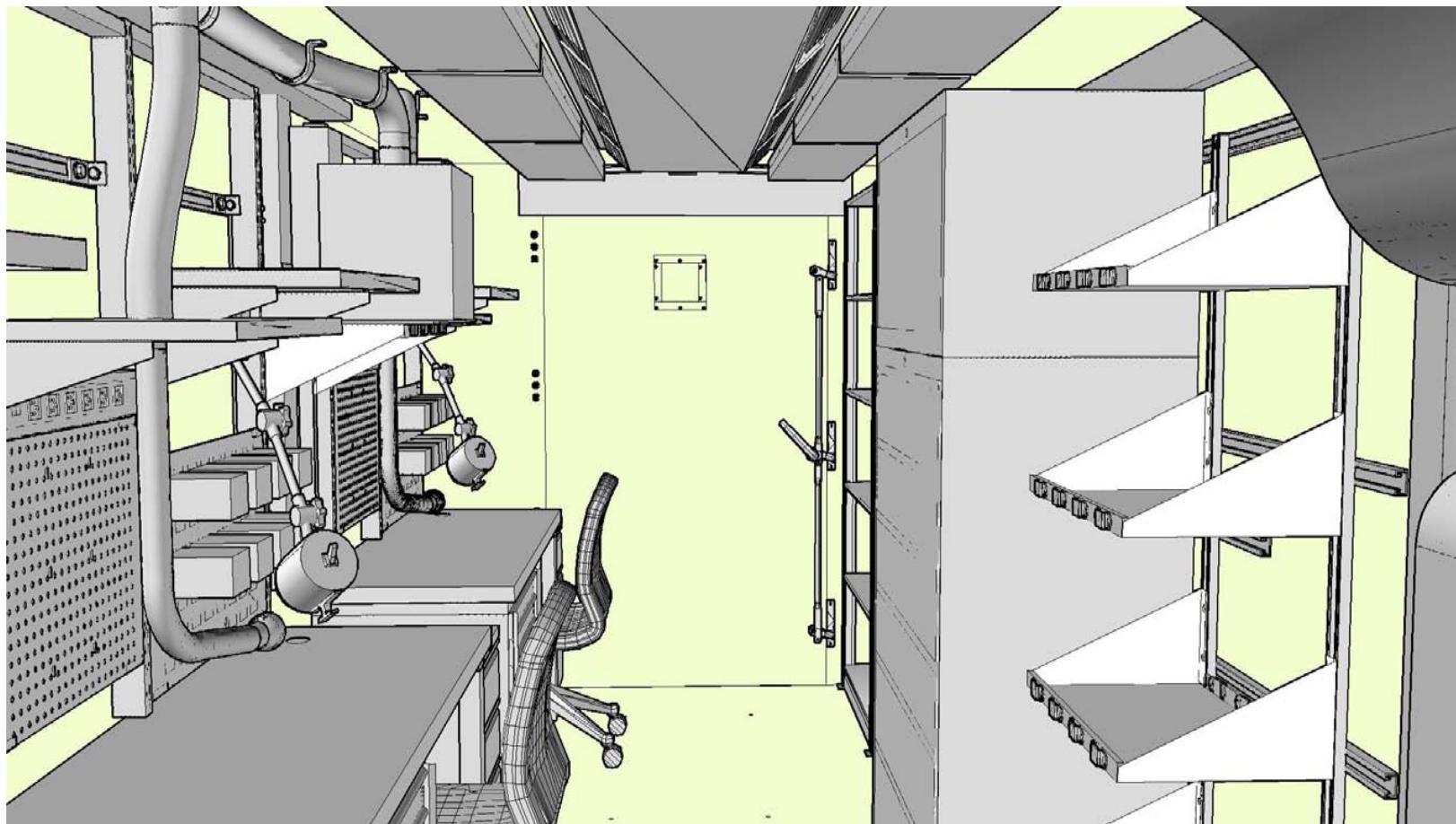
Provide Engineer & 3-D Drawings



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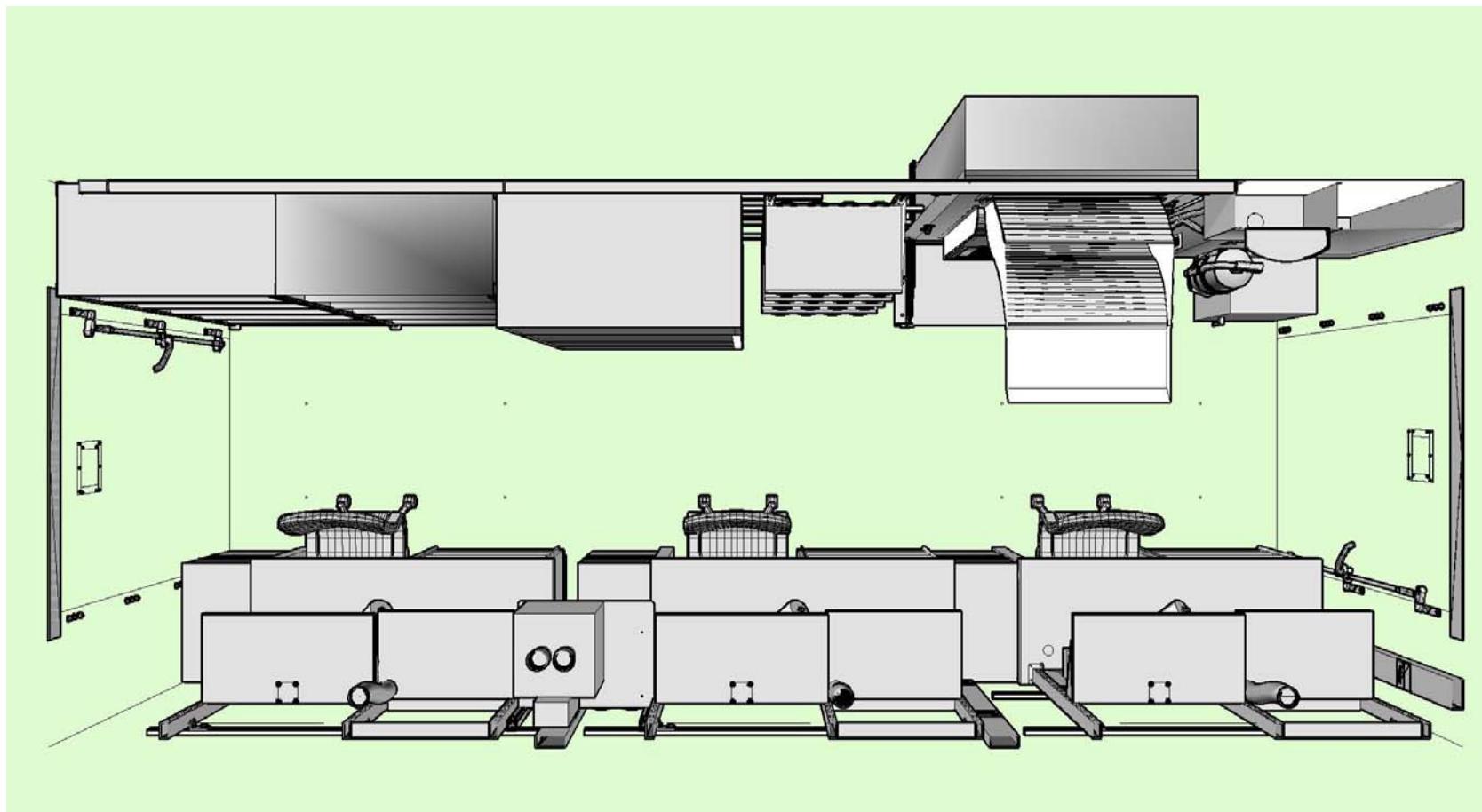
Provide Engineer & 3-D Drawings



MOBILE FACILITY PROGRAM



Provide Engineer & 3-D Drawings





New External Customers

- Army Theatre Aviation Maintenance Program (TAMP) Project Initiated
 - Procured seventy-five new & one used MFs
 - Delivered **x35** completed MFs to date
- METCAL six MFs for Guam Laboratory
- Army Forensics – refurbish eight MFs to BF-15 & two new shells to JU-15
- Joint Expeditionary Forensic Facilities (JEFF)—Dahlgren (NAVSEA)
 - Five MF complex (JU-15, JF-01, JF-02, JF-03 & JF-04)
 - Firearms analysis, DNA analysis, fingerprints, etc.
 - Require a Power Distribution Box (PDB)



FY-10 Projects

- Participating in Joint Committee on Tactical Shelters (JOCOTAS) w/ two new MF configurations – **please stop by our NAVAIR display**
 - KA-18A (RT-CASS Test Station)
 - CR-04 (2-M Micro-miniature Repair Work Station)
- Determine Supply “family of container” solution for MALSP-II, which is flexible, agile & supports distributive operations
 - Develop supply container / **module** solution to match Functional Needs Solution (FNS), which supports distributive operations; generated from MARFORPAC FISP / RESP Unfunded Needs Statement (UNS)
 - Similar to prototype BOH Environmental scaled down Stackable
 - There are **1,240** supply MFs with **~115 in OIF/OEF**
 - New solution needs to work in garrison, ESB, MOB, FOB, etc....all the way to FARP



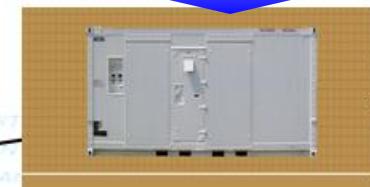
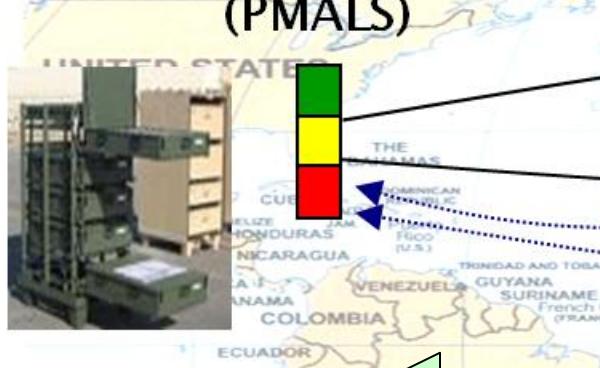
from this...

Push highly-capable footprint forward



...to this

Parent MALS
(PMALS)



T-AVB
(TBD)

Main
Operating
Base (MOB)

Forward
Operating
Base (FOB)

Enroute
Support
Base (ESB)



Dynamic, demand-pull logistics chain

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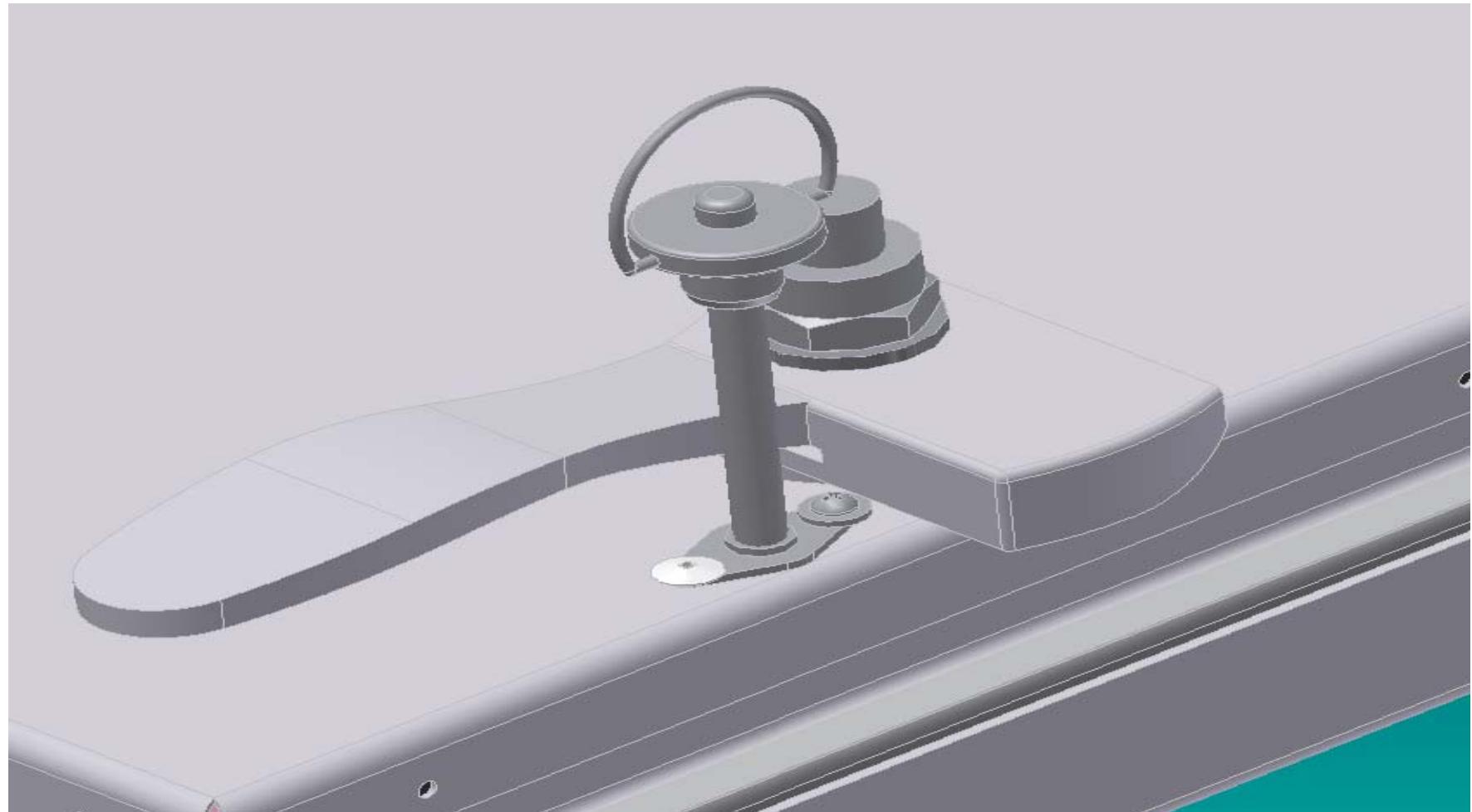
FY-10 Projects

- OIF RESET/Reconstitution of **x224** MFs in Al Asad
 - Determine return & required refurbishment
 - Overseas Contingency Operations (OCO) supplementals -- \$2.205M in FY-10 (**x63**)
- Sun-down of ELU-1 & NAF Washington MFs – Navy EA-6B sites
- RT-CASS High Power is **eighteen** sets (KA-19A / KA-20B)
 - Reconfigurable Transportable Consolidated Automatic Support System
- New Static Mobile Frequency Converters; **need \$14.1M**
 - Plan to sun-down legacy Mobile Motor Generators (MMG-1As)
 - Procuring new 400Hz Mobile Frequency Converters; converts 60Hz to 400Hz for aircraft maintenance
 - MARFORPAC UNS; require (**x152**) new SMFCs—submitting POM-12 Issue Sheet



FY-10 Projects

- TQG Level III Preservation—MOA signed between NAVAIR & MCA
 - Break ground in November 2009
 - Store about 65-75% of TQGs; remainder will stay at Fleet commands
 - MF Program baseline funds will pay for PMs & keep in RFU status
- Technology insertion on Gichner shells
 - Better undercoat to reduce external corrosion burden / new floor material?
 - Positive air relief valve vs. door louvers (prevent catastrophic failure of MF)
 - Different style door hinge (ease of removal for shipboard operations)
- ECU Door Plugs—need IRAC to **NA 19-25-177 (WP.14, Pg. 4, Para 15 “Installation”)** & material solution to prevent TFOMFs
 - Four tethered T-thumb pins on ECU plugs to prevent TFOMFs
 - Val/Ver conducted at MFCS Norfolk
 - NAWC-AD Lakehurst completing the Equipment Change Proposal (ECP)





FY-09 Accomplishments

- MMG-1A Rework—completed rework of (x77) on 19 April 2009
- Tactical Quiet Generator (TQG) delivery & E-Tool Kits
 - Delivered (163/179) MEP-807A & (139/205) MEP-809A
 - E-Tools completely delivered (x43)
- New MCO 13670.1 – signed Dec 2008 by LtGen Trautman
 - Allows HQMC to take ownership & control of Table of Basic Allowance (TBA)
- Completed **thirty-six** MFs for PMA-213 (Marine Air Traffic Control)
- RT-CASS MF Final Design (KA-17A USAF / KA-18A USMC)
 - Reconfigurable Transportable Consolidated Automatic Support System
 - Delivered **thirty** MFs w/ RT-CASS installed; Total KA-18As is **x115**

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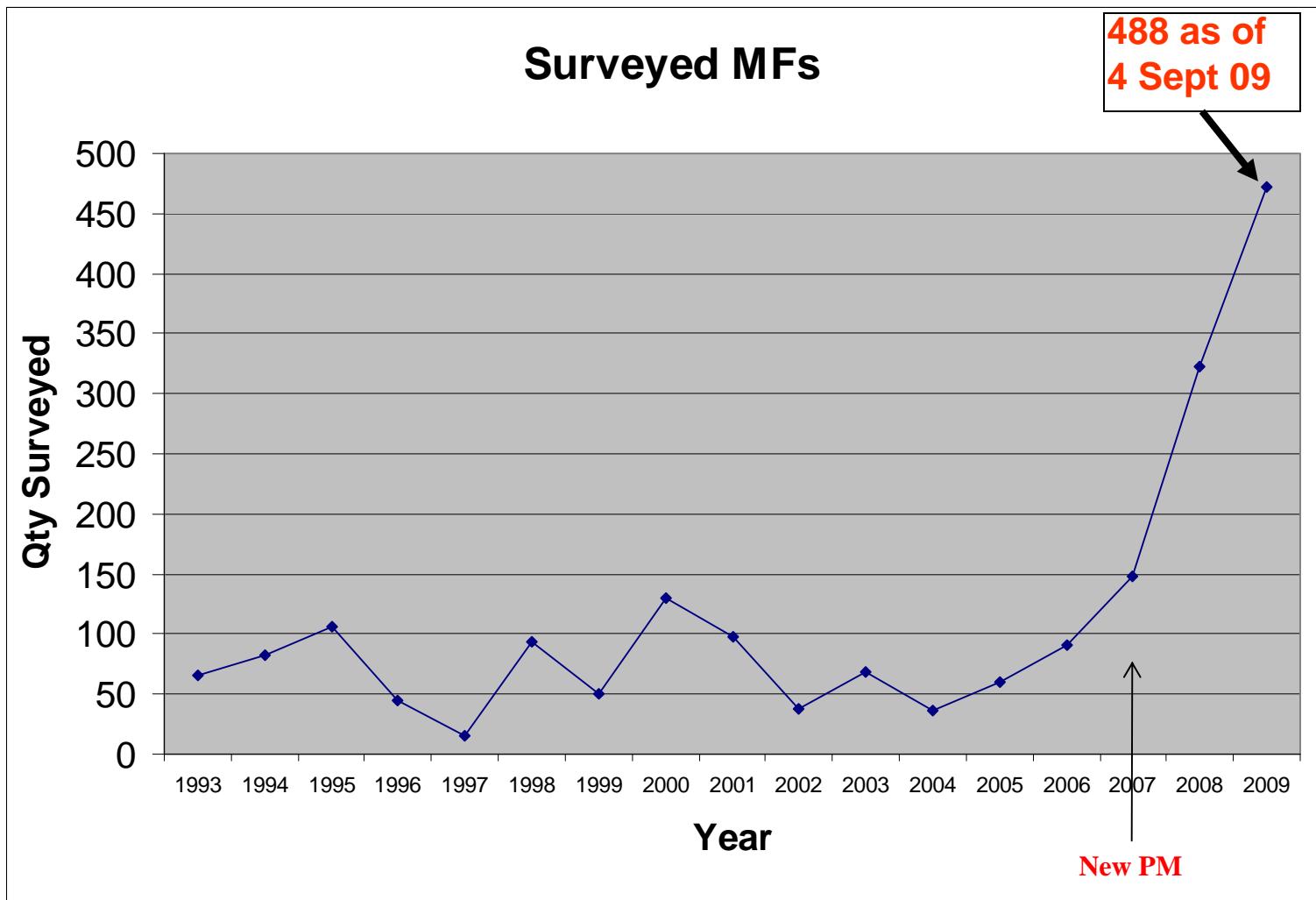


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FY-09 Accomplishments

- Update on SEC 5824 Val/Ver completed at MALS-14
 - Sent 20% of kits to Central Kitting Activity (CKA); will release final SEC this fall
 - Change MF Cooling circuitry to 40-amps vs. current 30-amps for R-134a ECU
- Engineering Ground-Neutral (G-N) separation site visits
 - Phase load balancing, grounding, power distribution, etc.
 - Last site to complete is **MALS-36 (Okinawa)**
- Finish G-N separation / phase load balancing / INU power meters
 - Prevent brownouts & blackouts; loss of production time & prevent damage to SE
 - Install Power Meters in INUs; may cost ~\$2K extra per MF
- Success of surplus/excess off-load—eliminated over 400 MFs in Fleet
- Aggressively worked to survey MFs that eat man-hours & resources
 - As of 4 Sep 09—FY-09 surveyed 488 MFs (waiting on x63 DD 1348s)



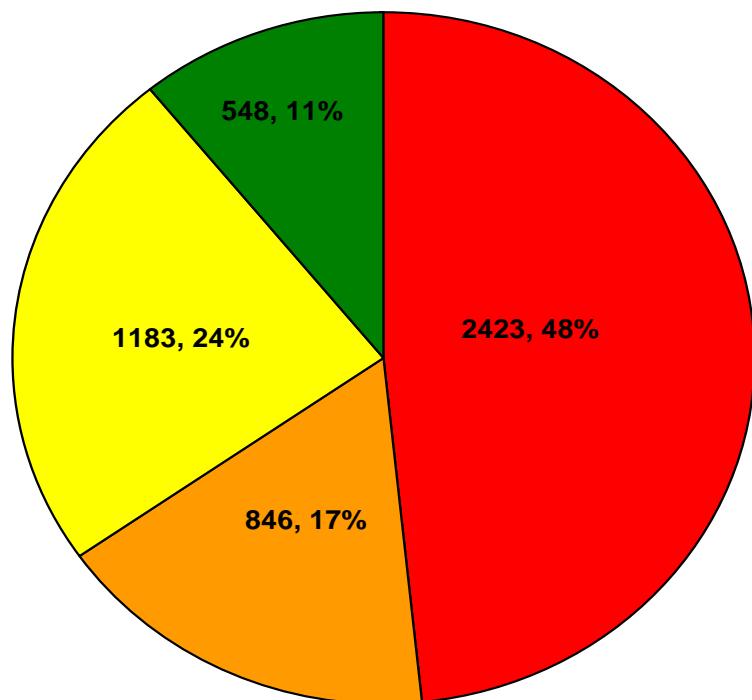


Future Projects

- Develop a Scheduled Depot Level rework event (Reliability Centered Maintenance?)—**treat MFs like Aircraft & Support Equipment**
 - Develop a metric to rework or sundown MF at correct interval
 - **Forced depot-level rework event at 12 - 15 year interval**
 - **Forced survey at 22 – 25 year interval**
 - **Increase rework/refurbishment tempo of MFs**
- Decision to re-use Fleet returned shells:
 - Age of shells
 - Current configuration & quantity of that configuration in inventory
 - Quantity of MFs of that configuration in the original CSC Authority Approval Number
 - Material condition of shell (i.e., number of cut-outs, corrosion, damage, etc.)

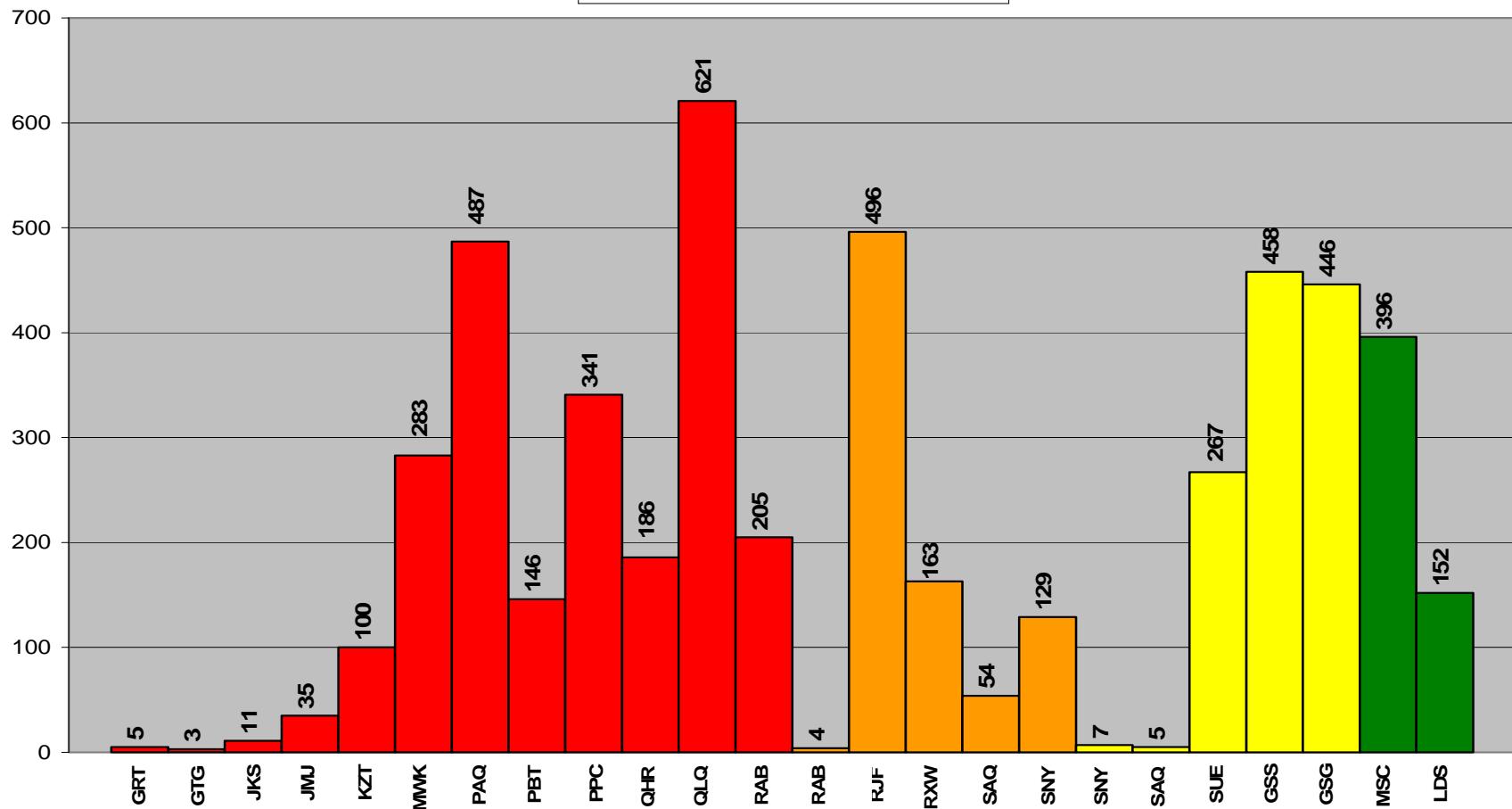
MF Lifespan Status

- 20+
- 15-19
- 10-14
- 1-9



MF Lifespan Status

■ 20+ ■ 15-19 ■ 10-14 ■ 1-9





Environmental Control Units





Ancillary Power





Complexing MFs

- Connecting multiple MFs together via INUs, produces large enclosed dust-free, temperature & humidity controlled, lighted, and self-contained work centers. Units may be connected end-to-end to produce an almost infinite variety of complex sizes and configurations.





Complexing/Decomplexing Tool (CDT)

- The CDT is used for short distance movement (e.g., while complexing an MF with another MF).





Modes of Transportation

Air

- C-130: 1 MFs (2 MFs in stretch C-130)
- C-17: 6 MFs
- C-5: 8 MFs

Shipboard (Commercial or TAVB)

Air-Ride Truck

Helo-Lifted with sling (not HSL certified)





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QUESTIONS?



www.mobile-facilities.com



Back-up Slides





MF Program History

- During WW II, propeller aircraft maintenance was performed in tents and hastily constructed wooden shacks
- Introduction of jet aircraft in the fifties, drove crude WW II maintenance shelters to become obsolete
- Research indicated a requirement for mobile trailer-type vans for peculiar jet aircraft maintenance
 - Needed dust free, temperature & humidity-controlled maintenance environment for servicing, testing & repairing complex avionics equipment



MF Program History (cont.)

- Navy purchased first 67 stand-alone vans in 1961
 - Supported Marine Corps Short Airfield for Tactical Support (SATS) concept
 - Consolidated Diesel Model 2111/2112, which was only 12 ½ feet long
- In 1964, the Navy bought the first 20-foot long van
 - Gichner Model 3010
 - First use of butting kits to integrate individual vans into complexes
- In 1975, standard-size van (tactical shelter or mobile facility) was adopted & military commercial sea-land containerization concept became a reality



MF Complex Desert Shield/Desert Storm

